WHAT IS CLAIMED IS:

1. A semiconductor laser device comprising:

a stem having a mounting surface;

a first semiconductor laser element directly or indirectly mounted onto the mounting surface of said stem, said first semiconductor laser element having an emission wavelength and a temperature dependence; and

a second semiconductor laser element disposed on top of said first semiconductor laser element, said second semiconductor laser element having an emission wavelength different from the emission wavelength of said first semiconductor laser element and a temperature dependence lower than the temperature dependence of said first semiconductor laser element.

2. The semiconductor laser device according to claim 1, wherein the emission wavelength of said first semiconductor laser element is within a wavelength range of 640-660 nm, while the emission wavelength of said second semiconductor laser element is within a wavelength range of 770-800 nm.

3. The semiconductor laser device according to claim 1, wherein said second semiconductor laser element provided on top of the first semiconductor laser element is smaller

in size than said first semiconductor laser element such that a part of a top surface of said first semiconductor laser element is exposed.

4. The semiconductor laser device according to claim 1, wherein each of said first and second semiconductor laser elements has an N-layer and a P-layer, and either the N-layers or the P-layers of said first and second semiconductor laser elements are adjacent to each other.

5. The semiconductor laser device according to claim 1, wherein each of said first and second semiconductor laser elements has an emission point and the emission points of said first and second semiconductor laser elements are located at an interval of 160 micrometers or less.

6. The semiconductor laser device according to claim 1, wherein there are a plurality of joined portions in which different soldering materials having different melting points are used.

7. A semiconductor laser device comprising:

a stem having a mounting surface; and

a plurality of semiconductor laser elements disposed one on top of another and directly or indirectly

mounted onto the mounting surface of the stem, said plurality of semiconductor laser elements having different emission wavelengths and different temperature dependences;

wherein said plurality of semiconductor laser elements are stacked in order of temperature dependence such that the laser chip farther from the mounting surface of the stem has a lower temperature dependence than the laser chip closer to the mounting surface of the stem.